

IN THE CLAIMS:

Please amend the claim as follows:

1. (Currently Amended) A bit rate-independent optical receiver, comprising:
 - an opto-electric converter ~~for~~ configured to ~~converting~~ an input optical signal into an electric signal;
 - an amplifier circuit ~~for~~ configured to ~~amplifying~~ the electrical signal;
 - a bit rate-sensing circuit connected to receive the amplified electrical signal ~~for~~ and configured to ~~generate~~ a sensing signal with a voltage level determined on the basis of a bit rate of the electrical signal;
 - a bit rate-recognition circuit ~~for~~ configured to ~~generate~~ a recognition signal that is further amplified from the sensing signal, said bit rate-recognition circuit having a structure of providing an extended range of recognizable total input voltages by connecting a plurality of logarithm amplifiers in series, each of which logarithm amplifiers has a predetermined range of recognizable input voltage;
 - a clock/data recovery circuit ~~for~~ configured to ~~reproduce~~ a clock signal and data from the amplified electrical signal in accordance with a control signal and outputting the reproduced clock signal and data; and,
 - a controller ~~for~~ configured to ~~determine~~ a bit rate corresponding to a voltage level of the recognition signal by referring to a look-up table defining a predetermined relationship of the bit rate to the voltage level, and for providing the clock/data recovery circuit with the control signal representative of the bit rate.

2. (Currently Amended) The optical receiver of claim 1, wherein the amplifier circuit further comprises a low-noise amplifier ~~for~~configured to eliminateing noise from the electrical signal outputted from the opto-electric converter and ~~for~~to amplifying the noise-free electrical signal by a given amplification factor; and, a limiting amplifier ~~for~~configured to re-amplifying the amplified electrical signal within a predetermined voltage level.

3. (Currently Amended) The optical receiver of claim 1, wherein the bit rate-recognition circuit further comprises:

a plurality of the logarithm amplifiers connected to sequentially amplify the sensing signal outputted from the bit rate-sensing circuit;

a plurality of rectifiers respectively connected to one input of the respective logarithm amplifiers and to one output of at least one said logarithm amplifier, the rectifiers ~~for~~configured to rectifying the sensing signal inputted thereto; and,

an adder connected to provide the sum of output signals of the plurality of rectifiers.

4. (Currently Amended) The optical receiver of claim 1, wherein the clock/data recovery circuit further comprises:

a phase-locked loop circuit ~~for~~configured to generateing a reference clock signal in accordance with the control circuit provided by the controller; and,

at least one flip-flop connected to reproduce a clock signal and data, in accordance with the reference clock signal, from the amplified electrical signal supplied from the amplifier circuit.

5. (Previously Presented) The optical receiver of claim 4, wherein the phase-locked loop circuit further comprises:

a phase comparator configured to comparing a frequency and a phase of the amplified electrical signal outputted from the amplifier circuit with those of the reference clock signal and consequently providing an error voltage according to the comparison;

a loop filter configured to filtering the error voltage outputted from the phase comparator and providing the filtered error voltage; and,

a voltage controlled oscillator configured to generating the corresponding reference clock signal on the basis of the error voltage of the loop filter and the control signal for oscillation of the controller.

6. (Currently Amended) The optical receiver of claim 1, wherein the controller comprises a memory ~~for~~ configured to storing a look-up table indicating a predetermined data set of the bit rate to the voltage level.

7. (Previously Presented) The optical receiver of claim 1, wherein the opto-electric converter further comprises a photo diode.